

Newsletter - Royal Belgian Society for Energy



KBVE-SRBE Celebrates 140 Years: A History of Progress and a Future Full of Innovation



This year marks the 140th anniversary of the Royal Belgian Society of Electrical Engineers (KBVE-SRBE), a key force in shaping Belgium's electrical engineering sector. As the energy landscape rapidly evolves, the association continues to play a central role in addressing new challenges and opportunities, especially in the shift towards sustainability.

Emerging trends are transforming the sector. Electrical load flexibility is becoming essential to balance the increasing integration of renewable energy sources, allowing energy consumption to adapt in real-time. E-mobility is reshaping both transportation and energy consumption, requiring upgrades to infrastructure and the integration of electric vehicles into smart grids. Carbon capture, utilization, and storage (CCUS) technologies offer a path to decarbonization, while battery energy storage systems are crucial for ensuring grid stability as renewable energy becomes more prominent.

Modernizing electrical grids with digital and smart technologies is key to managing these changes, ensuring the resilience and efficiency of energy systems. Sustainability remains the driving force behind these innovations, with a focus on reducing emissions and increasing energy efficiency.

A Future with a Broader Vision: KBVE Becomes the Royal Belgian Society of Energy

Given the rapid changes in the energy world, KBVE is broadening its horizon. The association will not only remain focused on electrical engineering but will also address the broader energy challenges we will face in the future. This includes the integration of both electrical and thermal energy systems, encompassing the management of gas flows such as CO₂, H₂, and natural gas, and the interplay between electrons and molecules in energy production and storage. As such, the association is evolving its name to the Royal Belgian Society of Energy, reflecting the crucial role that these diverse energy carriers, including hydrogen and natural gas, will play in the energy system of tomorrow.

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More than 100 participants for our Seminar on Battery Energy Storages Systems

More than 100 participants attended this very attractive study day and program featuring incredible insights from industry leaders like EnergyVille/ VITO, ENGIE Belgium, Memoco, Vrije Universiteit Brussel. With presentations of International Energy Agency (IEA), SWECO, John Cockerill, Bstore Estorlux and Octave, the discussions were sparking new ideas on the challenges and opportunities of battery energy storage in the green transition. As well, ENGIE Belgium highlighted the need for BESS in the wholesale markets.

Energyville introduced the BESS technology as an essential component to support the network flexibility fed by intermittent sources of renewable energy. More than 25 installations are started or in projects in Belgium to recover a capacity of 3.900 MW in 2030. By comparison, the global need in Europe for 2030 will rise to 100 GW. During the seminar, the main different technologies in the pipe were presented and compared with their specificities and domain of application: among of them, we can highlight Lithium-ion, Vanadium redox flow, Lead acid, Sodium Sulphur and Solid-state batteries

The university VUB presented the facilities of their battery and chemical laboratory that evaluate the aging factor and sensors to prolong the lifespan of the different battery installation.

Professor Hendrick presented the project SMARTACC that evaluate the feasibility, advantages and hurdles of using BESS for Common Energy Communities with the example of a RFB Vanadium 100 kWh project tested on site at Memoco (LLN) and supported by the Walloon region.

The critical minerals, as Lithium-Nickel-Cobalt-Copper and Graphite, were discussed by IEA in the context of the BESS demand grows over fifty-fold to 2050 to meet net zero targets in a market dominated by China for the downstream EV battery supply chain.

Grid connection architectures were introduced by SWECO while CE+T described advanced solutions for flexible microgrid sourced with RE and Batteries.

Among the projects presented, John Cockerill introduced The MiRIS microgrid at Seraing, Bstor introduced the Estor-lux installation with a capacity of 10 MW – 2 h in Bastogne industrial park and ENGIE described the future big BESS project in VILVOORDE for a capacity of 200MW – 800MW with HV connection to the Belgium grid.

Modular outdoor solutions towards a sustainable Battery Lifecycle were presented by OCTAVE that give a second life to the vehicle batteries.

Finally, ENGIE LABORELEC highlighted the operational insights into large-scale energy storage and first-of-a-kind projects as well the missions of their storage lab focusing on technical guidelines, risk management and safety and operational excellence with HAZOP and RCA. The study day was completed with the visit of the LABORELEC Storage and Power Laboratory.



The Roadmap to T&D Sustainability in the Energy Sector

Join us on Thursday, October 10, 2024, at Elia in Brussels for the "Roadmap to Sustainability in the Energy Sector" seminar. This event is tailored for industry leaders and entrepreneurs who are committed to staying at the forefront of the rapidly evolving transport and distribution (T&D) sector.

This seminar is crucial for businesses within the energy sector, particularly those managing energy-intensive and capital-intensive assets, such as grid operators, energy providers, and industries involved in BESS, storage, transport, and chemicals. We will explore the latest regulatory developments, innovative solutions, and practical approaches to advancing sustainability in T&D systems. Participants will gain key insights into the continuous progress needed in design tools, standards, product and service development, purchasing policies, and corporate social responsibility.

Given the increasing pressure on the T&D sector to innovate and meet sustainability objectives, understanding these developments is more important than ever. This seminar will bridge that knowledge gap by offering advanced strategies and insights that can be directly applied to your business. Our expert speakers, representing leading organizations such as Elia, Fluvius, Hitachi Energy, Deloitte, and T&D Europe, will share their expertise on integrating sustainable practices into T&D components and electrotechnical assets.

Event Details:

Date: October 10th, 2024

Time: 8:30 AM - 1:00 PM (followed by lab visits in the afternoon)

Venue: Elia, Quai Léon Monnoyerkaai, 3 - 1000 Brussels

Register now

Given the high relevance of this seminar to your operations, we encourage you to secure your place early by registering via https://kbve-srbe.be/en/events?event_id=50. Please note that participation is limited to 90 attendees.

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